

Amendments to the Drawings:

Enclosed are 2 sheets of replacement formal drawings, Figures 1 and 2, for filing in the above-identified application.

Attachments: Replacement Formal Drawings

REMARKS

Claims 11-15, 20-26, 35-42 are pending in the present application. Claims 1-42 were presented for examination. Claims 1-10, 16-19, and 27-34 have been cancelled by amendment.

In the office action mailed March 4, 2005 (the "Office Action"), the Examiner requested submission of new corrected drawings and objected to claims 41 and 42 based on informalities. The Examiner also rejected claims 1-19 and 26-34 under 35 U.S.C. 101, and claims 1-29, 33, and 35-42, under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,415,259 to Wolfinger et al. (the "Wolfinger patent"). Claims 30-32 and 34 were rejected in the office action under 35 U.S.C. 103(a) as being unpatentable over the Wolfinger patent.

With respect to the Examiner's request for new corrected drawings, formal drawings were previously submitted on July 23, 2001. However, formal drawings are being re-submitted to expedite examination of the present application.

With respect to the Examiner's objection to claims 41 and 42, the claims are shown below as being on separate sets of lines. Consequently, the Examiner's objection should now be withdrawn.

As previously mentioned, claims 1-10, 16-19, and 27-34 have been cancelled. The Examiner's rejection of these claims under 35 U.S.C. 102(e) is now moot. Claims 1-10, 16-19, and 27-34 have been cancelled in order to focus examination on the remaining claims, and should not be interpreted as tacitly acknowledging the merits of the Examiner's rejections of claims 1-10, 16-19, and 27-34.

The disclosed embodiments of the invention will now be discussed in comparison to the prior art. Of course, the discussion of the disclosed embodiments, and the discussion of the differences between the disclosed embodiments and the prior art subject matter, do not define the scope or interpretation of any of the claims. Instead, such discussed differences merely help the Examiner appreciate important claim distinctions discussed thereafter.

The present invention relates to a user-configurable scheduling method and apparatus configurable by a service organization for scheduling orders and workers in accordance with a constraint set including a programmable constraint set and a fixed constraint set. The programmable constraint set alters the schedule process from a normal process

governed by the fixed constraint set. The constraint set includes programmable rules and constants that can be used for altering the schedule process from a standard process to a reconfigured process configured by the service organization.

A scheduling system 200 according to an embodiment of the present invention is illustrated in Figure 2 of the present application. The scheduling system includes a negotiator 204, an assigner 208, and an optimizer 212 which perform negotiating, assigning, and optimizing functions through the use of a negotiation algorithm 216, an assignment algorithm 220, and an optimization algorithm 224, respectively. Operation of the negotiation algorithm 216, the assignment algorithm 220, and the optimization algorithm 224 of the scheduling system 200 is governed by a constraint set, which includes a set of rules and a set of constants. The set of constraints can be defined in a file that is then compiled into a library that are used when the negotiation, assignment, or optimization algorithms are executed. The set of rules include both fixed business rules, which are generally inaccessible by a service organization, and configurable rules that can be programmed by the service organization. The set of constants are programmable and may be used by the service organization to control the flow of execution of the rules. Their values can be changed at run time by dispatchers and system administrators to adjust the rule set based on different operating conditions. For example, changing the scheduling during a snow storm as compared to a sunny day, or scheduling during a major service outage.

Although the underlying structure of the negotiation, assignment, and optimization algorithms 216, 220, and 224 are fixed, and generally inaccessible to the service organization, the rules and the constants are invoked from within the negotiation, assignment, and optimization algorithms 216, 220, and 224 by rule identifiers that are coded into the algorithms. As a result, although the service organization cannot modify the algorithm itself, through the use of the programmable rules and constants, the service organization is provided with a mechanism by which the operation of the negotiation, assignment, and optimization algorithms 216, 220, and 224 of the scheduling system 200 may be customized or configured to the particular needs of the service organization using the scheduling system 200.

Claims 11, 20, 26, 35, and 42 are patentably distinct from the Wolfinger patent because the Wolfinger patent fails to disclose the combination of limitations recited by the claims. Claim 11 recites a computer-readable medium having instructions stored thereon for

causing a computer to perform a method for performing a schedule process, comprising programming a programmed constraint set to supplement or change a fixed constraint set, and executing a scheduling process that performs a process of scheduling orders to a worker in accordance with the programmed constraint set and the fixed constraint set. The Wolfinger patent fails to describe programming a programmed constraint set to supplement or change a fixed constraint set. The Wolfinger patent describes a scheduling system that automatically schedules orders from customers and performs schedule optimization. The scheduling system includes the use of a distributed online system 101 and a distributed offline system 102 for scheduling work. The online system 101 optimizes the tasks for the current day and individual new orders taken during the day. In contrast, the offline system 102 runs in a batch mode to take all orders in the system and re-optimize the jobs and the work pool. The offline system takes the results of its previous run and any updates provided by the online system 101, for example, new orders, cancelled orders, modified workflows, completed tasks, and generates a new optimized schedule.

No where in the Wolfinger patent is there a discussion of constraint sets having fixed rules and configurable rules, where the configurable rules are used to alter a scheduling process that runs in accordance with the fixed rules. The scheduling system described in the Wolfinger patent does not consider issues of configurability, or provide a user with the ability to alter the scheduling process through the use of configurable rules. For example, in describing the optimization process at col. 17, lines 28-49, there is no mention of providing any mechanism for a user to alter the optimization process according to a set of rules that can be configured or programmed by the user. Based on the description of the optimization process, it suggests that the process is fixed, and cannot be altered by a user. Additionally, the Wolfinger patent describes alternative embodiments that result from various modifications to the specific embodiment described, see col. 17, line 50-col. 18, line 15. However, none of the modifications or alternative embodiments consider providing user configurability through the use of user configurable rules that alter operation from a set of fixed rules.

Claim 20 is also patentably distinct from the Wolfinger patent because the Wolfinger patent fails to disclose the combination of limitations recited in claim 20. As previously discussed with respect to claim 11, the Wolfinger patent does not describe a

scheduling system that uses a set of rules having a set of fixed business rules and a programmable set of configurable rules. Moreover, the Wolfinger patent does not describe performing a schedule process of scheduling orders and workers in accordance with the set of rules as altered by the set of configurable rules. As previously discussed, the Wolfinger patent describes a scheduling system that includes an online system 101 and an offline system 102 for optimizing the schedule. These two systems, however, are not described as having any configurability that can be programmed by the user.

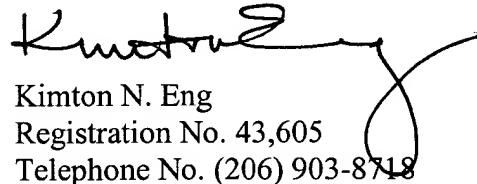
Similarly, claims 26, 35, and 42 recite limitations that are related to having a fixed set of rules and a configurable set of rules that can be used by a user to alter the schedule process in accordance with the configurable set of rules. Thus, the Wolfinger patent also fails to anticipate claims 26, 35, and 42 as well.

For the foregoing reasons, claims 11, 20, 26, 35, and 42 are patentably distinct from the Wolfinger patent. Claims 12-15, which depend from claim 11, claims 21-25, which depend from claim 20, and claims 36-41, which depend from claim 35, are similarly patentably distinct from the Wolfinger patent based on their dependency from a respective allowable base claim. That is, each of the dependent claims further narrows the scope of the claim from which it depends, and consequently, if a claim is dependent from an allowable base claim, the dependent claim is also allowable. Therefore, the rejection of claims 11-15, 20-26, 35-42 under 35 U.S.C. 102(e) should be withdrawn.

All of the claims pending in the present application are in condition for allowance.
Favorable consideration and a timely Notice of Allowance are earnestly solicited.

Respectfully submitted,

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Enclosures:

- Postcard
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